

Amendments to the Claims:

This listing of claims replaces all prior versions and listings of claims in the application:

Listing of Claims:

1. (Currently Amended) A microparticle less than about 20 microns in diameter, comprising:
~~a polymeric matrix consisting essentially of one or more synthetic polymers having a solubility in water of less than about 1 mg/l;~~
~~a carbohydrate;~~
~~a lipid; and~~
~~nucleic acid molecules, at least 50% of which are supercoiled circular plasmid DNA-a nucleic acid molecule, wherein the nucleic acid molecule is contained within the microparticle, and wherein the microparticle is not encapsulated in a liposome and the microparticle does not comprise a cell.~~
- 2-3. (Cancelled)
4. (Currently Amended) The microparticle of claim 1, wherein the ~~DNA-nucleic acid molecule~~ comprises an expression control sequence operatively linked to a coding sequence.
- 5-51. (Cancelled)
52. (Currently Amended) A preparation comprising a plurality of microparticles, each of which comprises a polymeric matrix, a carbohydrate, a nucleic acid molecule, and a lipid, wherein:

the polymeric matrix consists essentially of one or more synthetic polymers having a solubility in water of less than about 1 mg/l;
at least 90% of the microparticles have a diameter less than about 100 microns; and
the nucleic acid is an expression vector consisting of circular plasmid DNA molecules, at least 50% of which are supercoiled ~~the nucleic acid molecule is contained within the microparticle, and wherein the microparticles are not encapsulated in liposomes and the microparticles do not comprise cells.~~

53-63. (Cancelled)

64. (Currently Amended) The preparation of claim 52, wherein at least 90% of the microparticles have a diameter less than about 20-11 microns.

65. (Previously Presented) The preparation of claim 52, wherein the polymeric matrix is biodegradable.

66. (Previously Presented) The preparation of claim 52, wherein the polymeric matrix comprises a synthetic, biodegradable copolymer.

67. (Currently Amended) The preparation of claim 66, wherein the copolymer is poly-lactide-co-glycolide poly-lactic co-glycolic acid (PLGA).

68. (Previously Presented) The preparation of claim 67, wherein the ratio of lactic acid to glycolic acid in the copolymer is within the range of about 1:2 to about 4:1 by weight.

69. (Previously Presented) The preparation of claim 67, wherein the ratio of lactic acid to glycolic acid in the copolymer is about 65:35 by weight.

70-84. (Cancelled)

85. (New) The microparticle of claim 4, wherein the coding sequence encodes an expression product at least 7 amino acids in length and comprising a sequence identical to the sequence of (a) a fragment of a naturally-occurring mammalian protein, or (b) a fragment of a naturally-occurring protein from an infectious agent which infects a mammal.

86. (New) The microparticle of claim 85, wherein the expression product comprises a fragment of a protein selected from the group consisting of myelin basic protein (MBP), proteolipid protein (PLP), invariant chain, GAD65, islet cell antigen, desmoglein, α -crystallin, and β -crystallin, wherein the fragment binds an MHC class II molecule.

87. (New) The microparticle of claim 85, wherein the expression product comprises an amino acid sequence identical to a sequence selected from the group consisting of SEQ ID NOS 1-46.

88. (New) The microparticle of claim 85, wherein the expression product comprises a trafficking sequence selected from the group consisting of a sequence which trafficks to endoplasmic reticulum, a sequence which trafficks to a lysosome, a sequence which trafficks to an endosome, and a sequence which trafficks to the nucleus.

89. (New) The microparticle of claim 85, wherein the expression product comprises an amino acid sequence identical to the sequence of an antigenic portion of a tumor antigen.

90. (New) The microparticle of claim 85, wherein the expression product comprises an amino acid sequence identical to the sequence of an antigenic fragment of a protein naturally expressed by an infectious agent selected from the group consisting of a virus, a bacterium, and a parasitic eukaryote.

91. (New) The microparticle of claim 90, wherein the infectious agent is selected from the group consisting of human papillomavirus, human immunodeficiency virus, herpes simplex virus, hepatitis B virus, hepatitis C virus, *Plasmodium* species, and mycobacteria.

92. (New) The microparticle of claim 90, wherein the infectious agent is a virus.

93. (New) The microparticle of claim 1, wherein the lipid is a charged lipid.

94. (New) The microparticle of claim 1, wherein the lipid is hexadecyltrimethylammonium bromide.

95. (New) The microparticle of claim 1, wherein the polymeric matrix is biodegradable.

96. (New) The microparticle of claim 1, wherein the polymeric matrix comprises a synthetic, biodegradable copolymer.

97. (New) The microparticle of claim 96, wherein the copolymer is poly-lactide-co-glycolide.

98. (New) The microparticle of claim 97, wherein the ratio of lactic acid to glycolic acid in the copolymer is within the range of 1:2 to 4:1 by weight.

99. (New) The microparticle of claim 97, wherein the ratio of lactic acid to glycolic acid in the copolymer is 65:35 by weight.

100. (New) The microparticle of claim 1, wherein the polymeric matrix further comprises a targeting molecule.

101. (New) The microparticle of claim 1, wherein the microparticle has a diameter of less than about 11 microns.

102. (New) The microparticle of claim 1, wherein at least 60% of the circular plasmid DNA is supercoiled.

103. (New) The microparticle of claim 1, wherein at least 70% of the circular plasmid DNA is supercoiled.

104. (New) The microparticle of claim 1, wherein at least 80% of the circular plasmid DNA is supercoiled.

105. (New) The preparation of claim 52, wherein the polymeric matrix further comprises a targeting molecule.

106. (New) The preparation of claim 52, wherein the microparticles have a diameter of less than about 11 microns.

107. (New) The preparation of claim 52, wherein the microparticles are suspended in an aqueous solution.

108. (New) The preparation of claim 52, wherein the microparticles are a dry solid.

109. (New) The preparation of claim 52, wherein the lipid is a charged lipid.

110. (New) The preparation of claim 52, wherein the lipid is hexadecyltrimethylammonium bromide.

111. (New) The preparation of claim 52, wherein at least 60% of the circular plasmid DNA is supercoiled.

112. (New) The preparation of claim 52, wherein at least 70% of the circular plasmid DNA is supercoiled.

113. (New) The preparation of claim 52, wherein at least 80% of the circular plasmid DNA is supercoiled.